CLAIMS

1. An automatic programming method of positioning a product model in a work model, and determining a machining area based on a state of positioning the product model, the automatic programming method comprising:

a first processing including

detecting a turning surface having a largest diameter in the product model; and

determining a central axis of rotation on the turning surface detected as a turning axis of the product model;

a second processing including shifting or rotating the product model so that the turning axis of the product model determined matches a turning axis of the work model; and

a third processing including shifting the product model so that an end face of the product model shifted at the second processing matches a program origin preset in the work model.

2. The automatic programming method according to claim 1, further comprising a fourth processing including reversing a direction of the product model by 180 degrees with a central position of the product model in a direction of the turning axis as a center.

3. The automatic programming method according to claim 1, wherein when a part of the turning surface is missing, the first processing further includes setting a distance from the central axis of

rotation to the farthest point as a diameter of the turning surface.

4. The automatic programming method according to claim 1, wherein the product model is displayed in a state held by a jig model.

5. A computer program making a computer execute the method according to any one of claims 1 to 4.

6. An automatic programming device that positions a product model in a work model, and determines a machining area based on a state of positioning the product model, the automatic programming device comprising:

a first unit that detects a turning surface having a largest diameter in the product model, and determines a central axis of rotation on the turning surface detected as a turning axis of the product model;

a second unit that shifts or rotates the product model so that the turning axis of the product model determined matches a turning axis of the work model; and

a third unit that shifts the product model so that an end face of the product model shifted by the second unit matches a program origin preset in the work model.

7. The automatic programming device according to claim 6, further comprising a fourth unit that reverses a direction of the product model by 180 degrees with a central position of the product model in a

direction of the turning axis as a center.

8. The automatic programming device according to claim 6, wherein when a part of the turning surface is missing, the first unit sets a distance from the central axis of rotation to the farthest point as a diameter of the turning surface.

9. The automatic programming device according to claim 6, wherein the product model is displayed in a state held by a jig model.